



(88) Date of publication of the international search report:
14 August 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/43017

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01R 31/08

US CL : 324/509, 510

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 324/509, 510, 512, 551, 555

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EAST text search; key words: ground fault and detection, location, resistance or impedance.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y -- A	US 4,206,398 A [Janning] 03 June 1980 (03.06.1980), entire document	1-3,6,9-17 & 20 --- 4,5,7-8,18,19,211
Y	US 5,363,047 A [Dresti et al.] 08 November 1994 (08.11.1994), entire document	1-3, 6, 9, 11, 15-17 and 20
Y	US 4,159,499 A [Bereskin] 26 June 1979 (26.06.1979), entire document.	10
Y	US 5,739,693 A [Pfiffner] 14 April 1998 (14.04.1998), entire document.	12 -14

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

14 APRIL 2003

Date of mailing of the international search report

14 MAY 2003

Name and mailing address of the ISA/US
Commissioner of Patents and TrademarksBox PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

N. Le, USPTO

Telephone No.

(703) 308-0750

Deborah P. Vega
Patent SpecialistTechnology Center 2800
(703) 308-3078